

Claims

We claim:

1 1. A structure comprising:

2 a stack comprising a plurality of sheets such that each
3 successive sheet is coupled with a removable adhesive between
4 each sheet; and

5 an opening extending through the plurality of sheets
6 within the stack.

1 2. The structure of claim 1, wherein the sheets comprise a
2 material selected from the group consisting of copper, invar,
3 copper-invar-copper, aluminum, and molybdenum.

1 3. The structure of claim 1, wherein the removable adhesive
2 comprises a material selected from the group consisting of
3 fructose, sucrose, water soluble polymers, water, and water
4 solutions.

1 4. The structure of claim 1, further including:

2 a first surface of a first layer coupled with the
3 removable adhesive to a first surface of the stack wherein
4 the first layer prevents burr formation;

5 a first surface of a second layer coupled with the
6 removable adhesive to a second surface of the stack wherein
7 the second layer prevents burr formation; and
8 wherein the opening further extends through the first
9 and second layer.

1 5. The structure of claim 4, further including:

2 a first surface of a first foil contacting a second
3 surface of the first layer; and

4 a first surface of a second foil contacting a second
5 surface of the second layer.

1 6. The structure of claim 5, further including:

2 a first surface of a first plate contacting a second
3 surface of the first foil; and

4 a first surface of a second plate contacting a second
5 surface of the second foil.

1 7. The structure of claim 6, further including:

2 a first surface of a third plate contacting a second
3 surface of the first plate; and

4 a first surface of the fourth plate contacting a second
5 surface of the second plate.

1 8. The structure of claim 7, further including:

2 a first blotter pad comprising at least one blotter
3 sheet;

4 a first surface of the first blotter pad contacting a
5 second surface of the third plate;

6 a second blotter pad comprising at least one blotter
7 sheet; and

8 a first surface of the second blotter pad contacting a
9 second surface of the fourth plate.

1 9. The structure of claim 8, further including:

2 a first surface of a fifth plate contacting a second
3 surface of the first blotter pad; and

4 a first surface of a sixth plate contacting a second
5 surface of the second blotter pad.

1 10. The structure of claim 5, wherein the first and second
2 layer comprises a material selected from the group consisting
3 of impregnated and laminated epoxy/glass, phenolic/paper
4 laminate, and aluminum.

1 11. The structure of claim 6, wherein the first and second

2 foil comprises copper.

1 12. The structure of claim 8 wherein the first and second
2 blotter sheet comprises paper.

1 13. The structure of claim 9, wherein the fifth and sixth
2 plate comprises stainless steel.

1 14. A structure comprising:

2 a plurality of stacks wherein each successive stack is
3 coupled with a removable adhesive to an intermediate layer
4 between each stack wherein each intermediate layer prevents
5 burr formation; and

6 wherein each stack comprises a plurality of sheets such
7 that each successive sheet is coupled with a removable
8 adhesive between each sheet.

1 15. The structure of claim 14, wherein the sheets comprise a
2 material selected from the group consisting of copper, invar,
3 copper-invar-copper, aluminum, and molybdenum.

1 16. The structure of claim 14, wherein the removable
2 adhesive comprises a material selected from the group
3 consisting of fructose, sucrose, water soluble polymers,
4 water, and water solutions.

1 17. The structure of claim 14, wherein each intermediate
2 layer comprises a material selected from the group consisting
3 of laminated and impregnated epoxy, aluminum, and copper.

1 18. A method comprising:

2 forming a stack by stacking a plurality of sheets;
3 applying an adhesive between each successive sheet;
4 applying a vacuum to the plurality of sheets;
5 heating the plurality of sheets to melt the solid

6 adhesive;

7 applying a first pressure to the sheets;
8 cooling the plurality of sheets; and
9 forming an opening through the plurality of sheets.

1 19. The method of claim 18, further including applying a
2 second pressure to the sheets, wherein the second pressure is
3 greater than the first pressure.

1 20. The method of claim 18, further including:

2 dipping the plurality of sheets into a liquid solution;
3 heating the plurality of sheets to a melting temperature
4 of the adhesive;

5 separating each sheet from the plurality of sheets;
6 rinsing each sheet with water; and
7 drying each sheet.

1 21. The method of claim 18, wherein the adhesive is
2 fructose.

1 22. The method of claim 18, wherein the heat applied to the
2 plurality of sheets is about 50°C to 200°C.

1 23. The method of claim 19, wherein the first pressure is
2 about 25 to 75 psig. and the second pressure is about 200 to
3 400 psig.

1 24. The method of claim 20, wherein the liquid solution is
2 an ethylene glycol/water mixture.

1 25. The method of claim 18, further including:
2 applying a first layer to a first surface of the stack;
3 applying a second layer to a second surface of the
4 stack; and
5 extending the opening through the first and second
6 layer.

1 26. The method of claim 25, further including applying at
2 least one plate contacting the first and second layer.

1 27. The method of claim 26, further including applying at
2 least one blotter pad to each layer.

1 28. The method of claim 27, further including applying at
2 least one plate to each blotter pad for providing a surface
3 to apply pressure to the stack.

1 29. The method of claim 28, wherein the at least one plate
2 contacting the first and second layer of the stack, the at
3 least one blotter pad applied to each layer, and the at least
4 one plate applied to at least one blotter pad are removed
5 from the stack before the opening through the plurality of
6 sheets is formed.

1 30. A method comprising:
2 forming a stack by stacking a plurality of sheets;
3 applying a thin layer of water between each successive
4 sheet;
5 applying a pressure to the sheets; and
6 forming an opening through the plurality of sheets.

1 31. The method of claim 30, further including:
2 separating each sheet from the plurality of sheets;
3 rinsing each sheet with water for removing particles;
4 and
5 drying each sheet.